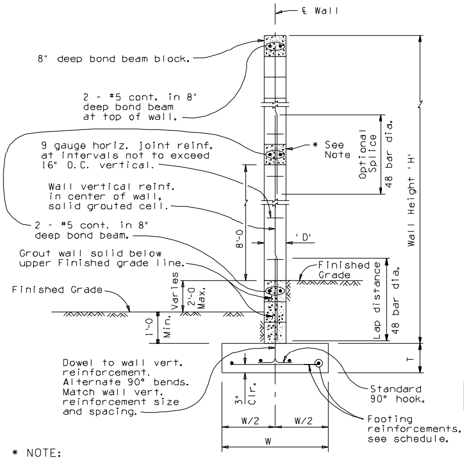
F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	AS BUILT
9	ARIZ.				

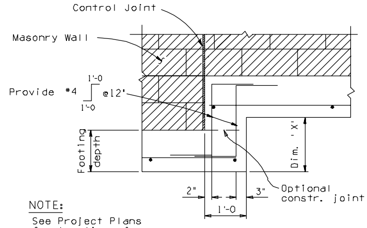


* NOTE:

Additional bond beam required for wall height H=12' and higher.

TYPICAL WALL SECTION

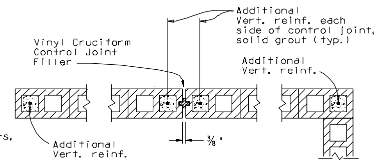
(For Wall Height 0'-0 to 17'-11)



NOTE:

See Project Plans for location of footing steps and Dim. 'X'.

FOOTING STEP DETAIL



Wall End

Control Joint

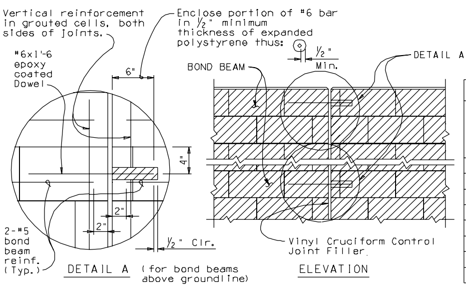
Max. spacing 24'-0

Wall Corner

WALL DETAILS AT JOINTS AND ENDS

NOTE:

See DWG. SD 8.02 (2 of 2) "TYPICAL SECTION THROUGH VERTICAL WALL REINFORCEMENT" for similar details not shown here.



DETAIL A (for bond beams above groundline)

ELEVATION

TYPICAL BOND BEAM DETAIL AT CONTROL JOINT

GENERAL NOTES:

Construction - Arizona Department of Transportation Standard Specifications for Road and Bridge Construction, Current Edition.

ACI 531, Specifications for Concrete Masonry Construction.

Design - AASHTO Standard Specifications for Highway Bridges, 17th Edition, 2003. Working Stress Design Method.

All concrete shall be Class 'S' unless noted otherwise.

Reinforcing Steel shall conform to ASTM Specification A615. All bar sizes shall be designed and furnished as Grade 60.

Stresses: Concrete .... f'c = 3,000 psi.
Masonry .... f'm = 1,500 psi.
Grade 60 Reinforcing Steel ...... fs = 24,000 psi.

Special Inspection is required for all masonry wall construction.

Wind Velocity 80 MPH, Exposure C.
Wind pressure 18.5 psf for height segment under 12'-0
Wind pressure 24.5 psf for height segment over 12'-0

Do not scale dimensions from drawings.

Vertical Cells containing reinforcements shall be grouted solid full height.

Bond Beam with reinforcements shall be grouted solid full length.

Control joints shall occur at intervals not to exceed 24'-0.

See Project plans for wall layout, top of footing and finished grade elevations, footing step and wall joint locations. Height of wall may vary ± 2 inches.

For wall treatment and type of block see Project Plans.

Location of Construction Joint shall match the location of a control joint.

Compact backfill for footing and wall base minimum 95 percent of ASTM D698 maximum dry density.

Pay Item includes all labor and materials for excavation, backfill, concrete footing and masonry wall with reinforcements. Pay Item is measured as wall height (H) times length of wall. Footing is included in the wall pay item.

Item No. 9140137
SOUND BARRIER WALL (MASONRY)
Measure: Square Foot

Materials Notes:

Masonry: f'm = 1500 psi, ASTM C90, Medium or Normal weight, Running Bond, SLUMP BLOCK unless noted otherwise.

Mortar: ASTM C270, Type S, Cube Strength 1800 psi, ASTM C91.

Grout: ASTM C476, Type: Coarse, Cube strength 2000 psi.

Reinforcing Steel: ASTM 615, Grade 60.
Joint Reinforcing: 9 gauge ladder or truss type, Standard weight, fy=33,000 psi, wire: ASTM A82.

(Continued Next Sheet)

WALL SCHEDULE

Wall Height H	Wall* Thick D	Ftg. Depth T	Ftg. Width W	Reinforcing**			Min. Req. Allowable Soil Bearing Capacity (psf)
				Wall	Footing		
				Vert.	Trans.	Long.	
0'-0 to 3'-11	8"	10"	1'-6	#4@24"	#4@24"	2-#4	1,000
4'-0 to 5'-11	8"	10"	2'-0	#4@24"	#4@24"	2-#4	1,300
6'-0 to 7'-11	8"	10"	2'-6	#5@24"	#4@24"	3-#4	1,500
8'-0 to 9'-11	8"	10"	3'-0	#5@24"	#5@24"	3-#5	1,600
10'-0 to 11'-11	8"	1'-0	3'-6	#5@16"	#5@16"	4-#5	1,700
12'-0 to 13'-11	12"	1'-3	4'-6	#5@16"	#5@16"	5-#5	1,900
14'-0 to 15'-11	12"	1'-6	5'-0	#6@16"	#5@8	5-#5	2,000
16'-0 to 17'-11	12"	1'-6	5'-6	#8@16"	#5@8	5-#5	2,100

* Nominal Dimension, ** Additional Reinf. required at Control Joints.

Note to Designer:
The information presented in this Standard Detail has been prepared in accordance with recognized engineering principles and is for general use. It should not be used for specific application without competent professional examination and verification of its suitability and applicability by a licensed professional engineer. Contents within the inner border line shall not be altered.

NO		MADE BY	DATE
1	Original Issue	S.U.H.	10-99
2	Wall Height Extension	S.U.H.	4-03
3	Clarify Joint Detail	S.U.H.	11-05
4			

Shafi U. Hasan

Jean A. Nehme

ARIZONA DEPARTMENT OF TRANSPORTATION
INTERMODAL TRANSPORTATION DIVISION
BRIDGE GROUP STRUCTURE DETAIL

SOUND BARRIER WALL (MASONRY)

SD 8.02 (1 of 2)

TRACS NO. ____ OF ____

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